



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Dan Kikinis et al.  
Serial No. : 09/708,220  
Filed : November 7, 2000  
Title : UNIVERSAL PROGRAMMING SYSTEM AND METHOD FOR ELECTRONIC  
PROGRAMMING GUIDE

Art Unit : 2611  
Examiner : Lonsberry, Hunter B.

**MAIL STOP AF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

NOTICE OF APPEAL

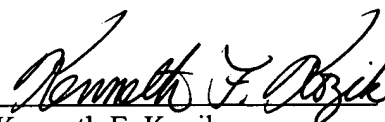
Applicants hereby file this Notice of Appeal appealing the Final Rejection dated September 27, 2005, to the Board of Appeals.

A check for \$500.00 for the Appeal fee based on Applicants large entity status is enclosed herewith.

Please charge any additional fees or credit any overpayments to Deposit Account No. 50-2324, referencing attorney docket no. 091451.00119.

Respectfully submitted,

Date: February 23, 2006

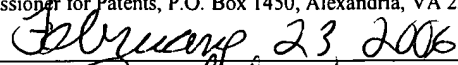
  
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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

IN REPLY TO THE FINAL OFFICE ACTION DATED SEPTEMBER 27, 2005

Applicant respectfully requests reexamination and reconsideration.

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

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Toni M. Sousa

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Listing of Claims:

1. (Previously amended) A system, comprising:
  - a 3-D enabled electronic programming guide (EPG) including a plurality of virtual worlds, wherein said plurality of virtual worlds is presented to a user for selection; and
  - a presentation engine enabling a user to choose one of the virtual worlds according to a preference and displaying program guide information within the chosen virtual world.
2. (Original) The system of claim 1 wherein software architecture of the system resides in a set-top box, a television, or a VCR.
3. (Original) The system of claim 1 wherein the presentation engine has a plurality of drivers, one of the drivers enabling the presentation engine to communicate with a television system for replenishing programming information.
4. (Original) The system of claim 1 wherein a memory in the system contains a plurality of objects, one class of objects providing the plurality of virtual worlds whose end result is a view that a user gets.
5. (Original) The system of claim 4 wherein another class of objects contains a pseudo-descriptive language describing schedule times, this class of objects having a channel identification or title that can be converted into an actual channel number or program identification.
6. (Original) The system of claim 5 wherein the class of objects containing the pseudo-descriptive language includes localized aspects.

7. (Original) The system of claim 4 wherein another class of objects are non-EPG objects including interaction objects used for e-commerce, one or more of the non-EPG objects conflated with one or more virtual worlds.

8. (Previously amended) The system of claim 1 wherein a virtual world is automatically selected by presented by the presentation engine based on program content selected by a user.

9. (Previously amended) The system of claim 1 wherein one of the virtual worlds is displayed in a matrix of rectangular boxes.

10. (Previously amended) A method, comprising:

providing a 3-D enabled electronic programming guide (EPG) comprising a plurality of virtual worlds wherein the plurality of virtual worlds is presented to a user for selection; and  
providing a presentation engine enabling a user to choose one of the virtual worlds and displaying program guide information within the chosen virtual world.

11. (Original) The method of claim 10 further comprising the step of providing a plurality of objects in a memory of the EPG.

12. (Original) The method of claim 11 wherein the memory is stored in a set-top box, a television system, or a VCR.

13. (Original) The method of claim 11 wherein one class of objects provides the plurality of virtual worlds whose end result is a view that a user gets.

14. (Original) The method of claim 13 wherein the virtual worlds contain a plurality of other objects, each object linked to an item to display.

15. (Previously amended) The method of claim 11 wherein one class of objects comprises a pseudo-descriptive language describing schedule times, this class of objects having a channel identification or title that can be converted into an actual channel number or program identification.

16. (Previously amended) The method of claim 15 wherein the class of objects comprising the pseudo-descriptive language includes localized aspects.

17. (Original) The method of claim 11 wherein one class of objects are non-EPG objects including interaction objects used for e-commerce, the non-EPG objects conflated with the plurality of virtual worlds.

18. (Previously amended) The method of claim 10 further comprising automatically selecting a virtual world based on user selections of program content.

19. (Original) The method of claim 10 wherein one of the virtual worlds is displayed in a matrix of rectangular boxes.

20. (Previously amended) A machine-readable storage medium tangibly embodying a sequence of instructions executable by the machine to perform a method for providing for a 3-D enabled electronic programming guide (EPG), the method comprising:

providing a plurality of objects in a memory of the EPG, one class of objects comprising one or more virtual worlds for selection;

providing a presentation engine with a plurality of drivers, one of the drivers enabling the presentation engine to communicate with a television system for replenishing programming information; and

providing and displaying a virtual world with program information based on selection of said plurality of objects using the presentation engine.

21. (Original) The machine-readable storage medium of claim 20 wherein software architecture of the system resides in a set-top box, a television, or a VCR.

22. (Original) The machine-readable storage medium of claim 20 wherein the presentation engine has a plurality of drivers, one of the drivers enabling the presentation engine to communicate with a television system for replenishing programming information.

23. (Previously amended) The machine-readable storage medium of claim 20 wherein another class of objects includes pseudo-descriptive language describing schedule times, this class of objects having a channel identification or title that can be converted into an actual channel number or program identification.

24. (Original) The machine-readable storage medium of claim 23 wherein the class of objects containing the pseudo-descriptive language includes localized aspects.

25. (Original) The machine-readable storage medium of claim 20 wherein another class of objects are non-EPG objects including interaction objects used for e-commerce, the non-EPG objects conflated with the plurality of virtual worlds.

26. (Previously amended) The machine-readable storage medium of claim 20 wherein the method further comprises automatically selecting a virtual world based on user selection of program content.

27. (Original) The machine-readable storage medium of claim 20 wherein one of the virtual worlds is displayed in a matrix of rectangular boxes.

28. (Withdrawn) The machine-readable storage medium of claim 20 wherein a user of the system chooses a virtual world to display programming information.

29. (Original) The machine-readable storage medium of claim 20 wherein a programmer chooses a virtual world to display programming information.

30. (Original) The machine-readable storage medium of claim 20 wherein a programmer and a user choose a virtual world to display programming information.

### REMARKS

Claims 1-27 and 29-30 are pending. Claims 1, 10 and 20 are independent.

Applicant respectfully requests reconsideration and reexamination in view of the remarks contained herein. No claim amendments have been made.

The examiner uses Finseth and Clanton to reject claims 1-5, 8-15, 18-23, 26, 27, 29 and 30 as having been obvious.

Applicant disagrees. For example, claims 1, 10 and 20 recite "a 3-D enabled electronic programming guide (EPG) including a plurality of virtual worlds, wherein said plurality of virtual worlds is presented to a user for selection," or similar language. Finseth and Clanton fail to teach or suggest at least this claim feature.

The examiner argues that this feature is disclosed in Finseth at col. 16, lines 32-34 and at col. 20, lines 57-59, reproduced below for the convenience of the examiner:

**An alternate embodiment of the invention electronic program guide 90E is shown in FIG. 8A. Electronic program guide 90E uses three dimensional space to arrange the program titles 94 and organizational categories 92. (Finseth, col. 16, lines 32-34)**

**The guide styles link 128 allows the user to select the electronic program guide 90 embodiment which he or she prefers. (Finseth, col. 20, lines 57-59)**

As these quoted sections above clearly indicate, no "plurality of virtual worlds is presented to a user for selection." Finseth's "categorical program guide links 136" are not applicant's "virtual worlds."

**The guide styles link 128 allows the user to select the electronic program guide 90 embodiment which he or she prefers. An example of a sub-menu 132 generated after a user selects the guide styles link 128 is shown in FIG. 10. The sub-menu 132 is generated by receiver 64. Similar to the operating menu 124, the sub-menu 132 is generated by receiver 64 using a digital image stored in memory 78. The digital image for the sub-menu 132 contains blank areas where titles to different program guide embodiments can be inserted. These titles are contained in the program guide data transmitted to receiver 64. The program guide titles are inserted into the blank areas as guide-links. The sub-menu 132 includes a grid guide link 134 and categorical program guide links 136. Selecting one of the guide-links 134 and 136 allows the user to choose the style of electronic program guide 90 that he or she wishes to view. Choosing the grid guide-link 134 would display the prior art program guide utilizing a grid format with program titles placed in "cells." Choosing one of the categorical program guide links 136 would display an embodiment of the invention categorical electronic program guide 90 described above and illustrated in FIGS. 4-8. (Finseth, col. 20, line 57 to col. 21, line 11)**



In Finseth, col. 2, line 63 to col. 3, line 12:

**FIG. 4 shows a preferred embodiment of the invention using time and topical subjects as organizational categories and displayed in a tree style format;**

**FIG. 5 shows a continuation of the embodiment shown in FIG. 4;**

**FIG. 6 shows a preferred embodiment of the invention using an actor, topical subjects and time as organizational categories and displayed in a tree style format;**

**FIG. 7 shows a preferred embodiment of the invention using time, channel and topical subjects as organizational categories and displayed in a tree style format;**

**FIG. 8A shows a preferred embodiment of the invention using time and topical subjects as organizational categories and displayed in a three dimensional format;**

**FIG. 8B shows a three dimensional top view of one group of program titles shown in FIG. 8A;**

Clearly, Finseth's categorical links 136 represent different formats in which channel and topical subjects are organized and displayed on a non-selectable background.

**An embodiment of the electronic program guide 90C using alternate organizational categories is shown in FIG. 6. Here, the organizational category 92, used as the first-level organization, is Gene Hackman (an actor) shown in first region 96. The second-level organization uses the topical subjects "Dramas", "Comedies" and "Action" as organizational categories 92. The second-level categories are located in the second regions 98A-98C. Third-level organization uses time based organizational categories 92, "This Week" and "This Month" shown in third regions 100A-100F. (Finseth, col. 15, lines 29-40)**

**As shown in FIG. 7, the organizational regions 96, 98, 100 and program title regions 102 are arranged vertically in the electronic program guide 90D, compared to the horizontal arrangement used in FIGS. 4-6. Here, the first region 96, showing the overall organization is placed near the bottom of the display. The second regions 98 and third regions 100 are then arranged from the top to the bottom of the display. This arrangement allows the flow of organization to be communicated intuitively to the user. Locating the organizational category 92 Thursday, Oct. 21, 1998 in the title region 96 at the bottom of the display still effectively conveys the title of the electronic program guide 90D. The title of the display is intuitively the broadest organizational category 92 of the program titles 94 displayed. Organizing the remaining categories from top to bottom of the electronic program guide 90D is intuitive to the user as well, since people are accustomed to reading from top to bottom. (Finseth, col. 16, lines 3-19)**

**An alternate embodiment of the invention electronic program guide 90E is shown in FIG. 8A. Electronic program guide 90E uses three dimensional space to arrange the program titles 94 and organizational categories 92. In this embodiment, the text indicating organizational categories 92 is eliminated, along with line connectors 104. By spatially arranging related program titles 94 in close proximity, the organizational levels are intuitively indicated. The regions used to indicate organization are spatially arranged along x-y-z axes. In other words, the electronic program guide 90E is placed three-dimensionally in space. The first-level of organization is shown in guide title region 96. Once**

again, this guide title region 96 intuitively communicates the broadest level of organization for the electronic program guide 90E. The second-level of organization is shown in second regions 98A-98F, which appear as 3-dimensional boxes (as stated previously, regions are indicated by dotted lines and are not actually displayed on the screen). The third-level organization is shown in the third regions 100A and 100B, which appear as parallel planes within second region. In order to better illustrate this embodiment of the invention electronic program guide 90E the dotted lines indicating third regions 100 have been omitted with the exception of second region 98F. Third regions 100 are further discussed in FIG. 8B. (Finseth, col. 16, lines 31-55)

This is very different from, and opposite to, what applicant's "virtual worlds" represent, i.e., selectable background themes upon which channel and topical subjects are displayed. Finseth fails to disclose, teach or suggest a 3-D enabled electronic programming guide (EPG) including a plurality of virtual worlds, wherein said plurality of virtual worlds is presented to a user for selection.

Clanton does not provide for this deficiency in Finseth. Clanton discloses a graphical user interface with user-selectable items presented on a non-selectable background:

**(T)he user interface of the present invention utilizes a metaphor in the form of a motion picture production studio back lot. Various spaces and objects exist in the metaphor, in both static and animated form, for identifying available programming and for providing a mechanism for the selection and viewing of a desired program by a subscriber. (Clanton, col. 2, lines 33-39)**

There is no user-selectable virtual world in Clanton, only a non-selectable back lot:

**The user interface environment of the present invention utilizes a "movie studio back lot metaphor", which, as illustrated in FIG. 4 presents the user with a virtual world of a movie studio back lot. The interface design provides an animated three dimensional view through the gates of a back lot entitled "Moviewood". As shown in FIG. 4, the back lot studio metaphor of the present invention includes a "bird's eye view" of a center square of a studio back lot. The metaphor includes a variety of Spaces surrounding the studio back lot. (Clanton, col. 8, lines 20-23)**

Clanton fails to teach or suggest "a 3-D enabled electronic programming guide (EPG) including a plurality of virtual worlds, wherein said plurality of virtual worlds is presented to a user for selection." No combination of Finseth and Clanton teaches or suggests applicant's quoted claim feature.

Accordingly, claims 1, 10 and 20 are not obvious in view of Finseth and Clanton, whether taken separately or in combination.

The examiner uses Finseth, Clanton and LaJoie to reject claims 6, 16 and 24 as having been obvious.

Claims 1, 10 and 20 recite "a 3-D enabled electronic programming guide (EPG) including a plurality of virtual worlds, wherein said plurality of virtual worlds is presented to a user for selection." The cited references fail to teach or suggest this claim feature.

Finseth and Clanton were discussed above. LaJoie fails to provide for the deficiencies of Finseth and Clanton.

LaJoie does disclose an inter-active program guide with default selection control, but fails to disclose, teach or suggest a plurality of virtual worlds presented to a user for selection:

**FIG. 16 illustrates the time mode of interactive program guide (IPG) 338 of the preferred embodiments of the present invention. As shown, guide 338 comprises a program viewing window 340, a current time and channel indicator 342, a highlighted channel banner 344, a highlighted program summary 346, a guide date and time bar 348, a channel list 350, a program grid 366, and available key indicators 352, 354, 356, 358, 360, 362, and 364. As shown, region 339 around indicator 360 is highlighted as compared with the regions 341 and 343 around indicators 362 and 364, respectively, to indicate that the interactive program guide is in the time mode rather than alternative theme or title modes. Program viewing window 340 displays a reduced size display of the normal television display so that the program being viewed prior to entering the program guide may continue to be viewed while in the guide. Incorporated into program viewing window 340 is a current time and channel indicator 342. Indicator 342 may be transparent, as shown, or opaque, and displays the time and channel number currently being displayed. Highlighted channel banner 344 may indicate logo 368, call sign 370, and number 372 for the channel highlighted in channel list 350 by channel shadow 392. Highlighted program summary 346 may list the program name 374, running time 376, brief description 378, and icons 380 indicating characteristics of the program such as closed captioning, Second Audio Program (SAP), and stereo when applicable, for the program highlighted in program grid 366 by program cursor 394. Guide date and time bar 348 lists in a horizontal arrangement, from left to right, the day 382, date 384, and times 386 of programs listed in program grid 366. Times 386 typically increment in half hour steps, and span one and a half hours, although other time increments and spans could be used. Channel list 350 is positioned beneath day 382 and date 384 indicators of guide date and time bar 348, and lists call signs 388 and channel numbers 390 for each of the channels available to the user. As shown, only a portion of channel list 350 is usually displayed at any given time as indicated by up and down arrow indicators 352 and 354.**

**Program grid 366 comprises a plurality of rows, each comprising at least one program cell 396. The number of rows in grid 366 matches the number of displayed channels in channel list 350, and each row in grid 366 is vertically aligned with the displayed channels in channel list 350 so that the displayed channels act as labels for each row. The size of each cell 396 in grid 366 is a function of the length of the program identified in that cell. For example, the cell entitled "Encounters" in grid 366 is one half hour long to indicate that the program "Encounters" is one half hour long. Similarly, the cell entitled "Money Line" in grid 366 is one hour long to indicate that the program "Money Line" is one**

hour long. The beginning time of each cell can be determined by referring to the time indicated in date and time bar 348 directly above the leftmost end of each cell. For example, the cell entitled "Money Line" begins at 4:30 pm as indicated by the time indicator "4:30 pm" positioned directly above the leftmost end of the cell.

The user of interactive program guide 338 navigates the program listings of grid 366 to highlight the desired program cell 396 with cursor 394 by pressing up, down, left, and right arrow keys (not shown) as indicated by up, down, left, and right arrow indicators 352, 354, 356, and 358. In the preferred embodiments, cursor 394 is always shadowed in channel list 350 by channel shadow 392 and in date and time bar 348 by time shadow 393. In these embodiments, channel shadow 392 always remains vertically aligned with cursor 394 to indicate the channel on which the program highlighted by cursor 394 can be found. Similarly, in these embodiments, time shadow 393 always remains horizontally aligned with cursor 394 to show the beginning of the time frame highlighted by cursor 394. For example, as shown "KCBS 2" in channel list 350 and "4:00 pm" in date and time bar 348 are shadowed by channel shadow 392 and time shadow 393, respectively, to indicate that "CBS Sports . . ." is on channel "KCBS 2" at "4:00 pm."

In the preferred embodiment of the present invention, cursor 394 does not move within grid 366 of the interactive program guide. Program cells 396 of grid 366, call signs 388 and channel numbers 390 of channel list 350, and times 386 of date and time bar 348 scroll instead. For example, as the user presses up and down keys 128, call signs 388 and channel numbers 390 in channel list 350 and program cells 396 in grid 366 scroll down and up, respectively. As the user presses left and right arrow keys 128, times 386 in date and time bar 348 and program cells 396 in grid 366 scroll right and left, respectively. In the vertical directions, call signs 388, channel numbers 390, and cells 396 scroll one row for each depression of up or down arrow key 128. In the horizontal direction, times 386 and cells 396 scroll by one increment in the times of date and time bar 348 (e.g., one half hour as illustrated) for each depression of the left or right arrow key 128. Alternatively, in the horizontal direction, times 386 and cells 396 could scroll to the next program cell 396 immediately following the currently highlighted program cell 396 when the user presses right arrow key 128, and scroll to the previous program cell 396 immediately preceding the currently highlighted program cell 396 when the user presses left arrow key 128. After the cells have scrolled up or down, or left or right, the stationary cursor 394 expands or contracts to highlight (preferably entirely) the leftmost program cell, and only the leftmost program cell, that has moved under the cursor's stationary position. Thus, the stationary cursor reacts in the same manner (to highlight the underlying cell) irrespective of the direction of movement of the underlying program grid 366. (LaJoie, col. 23, line 44 to col. 25, line 14)

Accordingly, claims 1, 10 and 20 are not rendered obvious by Finseth, Clanton and LaJoie.

Claims 6, 16 and 24 depend upon, and add further limitations to, claims 1, 10 and 20. Accordingly, claims 6, 16 and 24 are not rendered obvious by Finseth, Clanton and LaJoie.

The examiner uses Finseth, Clanton and Shoff to reject claims 7, 17 and 25 as having been obvious.

Claims 1, 10 and 20 recite "a 3-D enabled electronic programming guide (EPG) including a plurality of virtual worlds, wherein said plurality of virtual worlds is presented to a user for selection." The references fail to teach or suggest this claim feature.

Finseth and Clanton were discussed above. Shoff fails to provide for the deficiencies of Finseth and Clanton.

Shoff discloses an interactive entertainment system for supplying interactive supplemental content along with continuous video content programs to viewers. (Shoff, col. 2, lines 56-58). Shoff discloses a standard electronic programming guide (EPG) that can be used to initiate display of video content and supplemental content constructed of hypertext:

**Each viewer computing unit 24 is configured to run an electronic program guide (EP). The EPG provides an on-screen listing of various programs or program titles. The listing is organized in a predetermined arrangement that is displayed on the television. The EPG might also include other program descriptive information, including whether the program is provided in closed caption or stereo. (Shoff, col. 4, lines 35-42)**

An EPG server provides programming information for display:

**An EPG server 44 is provided at headend 22 to serve the programming information needed by the EPG at the viewer computing unit 24. (Shoff, col. 5, lines 6-8)**

An enhanced content server provides supplemental information that is displayed along with streaming video content:

**The headend 22 further includes an enhanced content server 52 which serves supplemental interactive content to the viewer computing units to enhance or supplement the continuous video streams served by the continuous media server 42. (Shoff, col. 5, lines 12-16)**

Supplemental content is hypertext:

**In the implementation described herein, the supplemental content is constructed as a hypertext file which is rendered by a browser. (Shoff, col. 5, lines 24-26)**

Shoff fails to disclose, teach or suggest a 3-D enabled electronic programming guide (EPG) including a plurality of virtual worlds, wherein said plurality of virtual worlds is presented to a user for selection. Accordingly, claims 1, 10 and 20 are not rendered obvious by Finseth, Clanton and Shoff.

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Claims 7, 17 and 25 depend upon, and add further limitations to, claims 1, 10 and 20. Accordingly, claims 7, 17 and 25 are not rendered obvious by Finseth, Clanton and Shoff.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Respectfully submitted,

Date: February 23, 2006

  
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